



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/665,487	09/22/2003	Danald R. Lyons	HAMPT-2C1	6889

23599 7590 04/26/2004

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
2200 CLARENDON BLVD.
SUITE 1400
ARLINGTON, VA 22201

EXAMINER

KIANNI, KAVEH C

ART UNIT	PAPER NUMBER
----------	--------------

2877

DATE MAILED: 04/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/665,487	Applicant(s) LYONS, DANALD R.	
	Examiner Kevin C Kianni	Art Unit 2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 13-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 13 is/are rejected.
- 7) ☐ Claim(s) 2-5 and 14-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Acknowledgement made of applicant's canceling of claims 6-12 and 16-22, in preliminary amendment, on 9/22/2003.

Allowable Subject Matter

2. Claims 2-5 and 14-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 2 and 14 are allowable because the prior art of record, taken alone or in combination, fails to disclose or render obvious grating is formed in the cladding in combination with the rest of the limitations of the base claim and intervening claim. Claims 3-5 and 15 depend, consecutively, on claims 2 and 14 and therefore they are also allowable.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bohnert et al. (US 6597821).

Regarding claim 1, Bohnert teaches a detector for sensing variations in properties of a fluid flowing in a boundary layer adjacent to the detector (shown in at least fig. 1; see also abstract), the detector comprising:
an optical fiber 2 having a core layer 51 covered by a cladding layer 52 defining a planar surface (shown in at least fig. 2a-b, item D shaped fiber having core 51 and cladding 52) with an optical grating pattern thereon (shown in fig. 1, item gratings 4a,b, also 5a,b are written on fiber 7b), whereby when a beam of laser light is directed through the detector as an input (see fig. 1, item 8 as an input/laser light source), variations in an output of the beam of laser light are indicative changes in fluid pressure or density in the boundary layer adjacent to the grating of the optical fiber (see abstract; also see col. 3, lines 11-46; also col. 7, lines 12-39).

However, Bohnert does not explicitly teach wherein the above optical fiber is an optical waveguide. Nevertheless, Bohnert states that the optical fiber is composed of core and cladding (shown in fig. 2, items 52 and 51). Thus, it is well known to those of ordinary skill in the art that an optical fiber composed of core and cladding is known as an optical waveguide, since such an optical waveguide provides good measurement sensitivity and a large measurement range (see col. 2, lines 7-12).

Regarding claim 13, Bohnert teaches method (the method of forming a device is not germane to the issue of patentability of the device itself. Therefore, this limitation has not been given patentable weight) for sensing variations in properties of a fluid flowing in a

Art Unit: 2877

boundary layer adjacent to a detector (shown in at least fig. 1; see also abstract), the method comprising:

directing a beam of laser light through an optical fiber 2 having a core layer 51 covered by a cladding layer 52 and defining a planar surface with an optical grating pattern thereon (shown in fig. 1, item gratings 4a,b, also 5a,b are written on fiber 7b), and detecting variations in an output of the beam of laser light indicative changes in fluid pressure or density in the boundary layer adjacent to the grating of the optical fiber (see abstract; also see col. 3, lines 11-46; also col. 7, lines 12-39). Regarding Bohnert's teaching of a waveguide the arguments presented in rejection of claim 1, above, is analogous in rejection of claim 13.

Citation of Relevant Prior Art

5. Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

Kempen et al. 6201912

Croteau et al. 6550342

Roman et al. 6137442

Hey et al. 6278811

Quigely et al. 6361299

Groger et al. 5177805

Art Unit: 2877

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to K. Cyrus Kianni whose telephone number is (571) 272-2417.

The examiner can normally be reached on Monday through Friday from 8:30 a.m. to 6:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font, can be reached at (571) 272-2415.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to:

(703) 872-9306 (for formal communications intended for entry)

or:

Hand delivered responses should be brought to Crystal Plaza 4, 2021 South Clark Place, Arlington, VA., Fourth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0956.

K. Cyrus Kianni
Patent Examiner
Group Art Unit 2877



Frank Font
Supervisory Patent Examiner
Group Art Unit 2877

April 12, 2004